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Charles Chi Jia

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

LAROSE, COLIN M

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 04/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/845,869

Applicant(s)

JIA ET AL.

Examiner

Colin M. LaRose

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. The following sections of 37 CFR §1.75(a) and (d)(1) are the basis of the following objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

2. Claim 14 is objected to under 37 CFR §1.75(a) and (d)(1) as failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Regarding claim 14, there is no antecedent basis for “the defining.”

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11, 13-20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,140,348 by Jamzadeh et al. (“Jamzadeh”).

Regarding claim 1, Jamzadeh discloses a method for automatically generating a framed digital image, comprising:

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analyzing a portion of a first data set representing rows and columns of pixels of an unframed digital image so as to identify at least one image characteristic for the digital image (column 4, lines 28-41 and 64-68: image is analyzed for color frequency);

determining at least one frame attribute based on the at least one image characteristic (column 5, lines 10-13: high frequency colors are selected for inclusion in the frame); and

generating a second data set representing rows and columns of pixels of the framed digital image, the pixels defining a representation of the unframed digital image surrounded by a frame having the at least one frame attribute (column 4, lines 28-41: framed image is generated, wherein the framed portions include at least one of the dominant colors (i.e. attributes)).

Regarding claim 2, Jamzadeh discloses the analyzing includes:

mapping the pixels of the first data set to a 2-d image space (column 3, lines 2-12: image signal is mapped to a 2-d digital image); and

selecting at least one region of the 2-d image space for analysis (column 4, lines 64-68: the entire image is selected for analysis).

Regarding claims 3 and 4, Jamzadeh discloses the region is a single region encompassing all pixels (column 4, lines 64-68) and therefore includes a subset of all pixels.

Regarding claim 5, Jamzadeh discloses the analyzing includes:

mapping the pixels of the first data set to a 3-d color space for analysis and selecting at least one region of the 3-d color space for analysis (see figure 6 and column 4, lines 48-68).

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Regarding claim 6, Jamzadeh discloses the selecting is performed in accordance with a principal component analysis technique (i.e. principal color components – R, G, and B – are analyzed).

Regarding claim 7, Jamzadeh discloses identifying a dominant color (column 4, lines 64-68).

Regarding claim 8, Jamzadeh discloses the image characteristic is color strength (i.e. RGB color values).

Regarding claim 9, Jamzadeh discloses the determining is further based on a predetermined relationship between at least some of the image characteristics and individual frame attributes (column 5, lines 10-13: logic/control unit 30 is programmed to determine the frame color (“frame attribute”) by selecting one of the dominant colors (“image characteristics”)).

Regarding claim 10, Jamzadeh discloses the determining comprises:

assigning the unframed digital image to an image category based on the at least one image characteristic (column 4, lines 64-68: the image is categorized as being dominated by a certain color); and

choosing the at least one frame attribute based on the image category (column 5, lines 10-13: frame attribute (i.e. color) is chosen based on the image category, which is determined by the frequency of colors in the image).

Regarding claim 11, Jamzadeh discloses the choosing further comprises:

mapping the image category to at least one framing rule for a corresponding at least one framing scheme parameter (column 5, lines 10-18: the image category (i.e. the color

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characteristics of the image) are mapped to a “framing rule” (i.e. how the frame is to be constructed) corresponding to a framing parameter, which comprises programmed information that denotes the selection of a certain dominant color); and

determining the at least one frame attribute according to the at least one framing rule (i.e. the framing rule denotes the frame color).

Regarding claim 13, Jamzadeh discloses the framing scheme parameters is color scheme, and the at least one framing rule specifies a color scheme of similar (i.e. dominant color is selected for the frame, so that the frame color is similar to the color scheme of the image).

Regarding claim 14, Jamzadeh discloses the predetermined relationship can be modified (column 5, lines 10-13: logic/control unit 30 can be programmed to any of a number of predetermined relationships).

Regarding claim 15, Jamzadeh discloses sending the second data set to an imaging device for producing the framed digital image (figure 1: processed image is sent to printer for printing).

Regarding claim 16, Jamzadeh discloses the representation of the unframed image is scaled in the framed image (column 3, lines 19-30: user selects the size of the outputted (framed) image).

Regarding claim 17, Jamzadeh discloses the frame attribute is border color (column 4, lines 30-41).

Regarding claim 18, Jamzadeh discloses an image processing apparatus (figure 1), comprising:

image analyzer to receive and process a portion of a first data set representing rows and columns of pixels of an unframed digital image so as to identify at least one image attribute for the digital image that is visually attractive to the unframed digital image (column 4, lines 64-68 and signal processor 42: image is analyzed for color frequency); and

framed image generator coupled to the image analyzer for processing the first data set and the at least one image attribute so as to automatically generate a second data set having rows and columns of pixels representing a framed digital image including a representation of the unframed digital image surrounded by a frame having the at least one frame attribute (column 4, lines 28-41 and logic/control unit 30: framed image is generated, wherein the framed portions include at least one of the dominant colors (i.e. attributes)).

Regarding claim 19, Jamzadeh discloses the image analyzer further comprises:

a component identifier adapted to receive the first data set and identify at least one individual image component therefrom (column 4, lines 42-47: the signal processor 42 receives the image and identifies the RGB values of the pixels (“image components”));

a component characterizer communicatively coupled to the component identifier for determining at least one component characteristic for certain ones of the individual image components (column 4, lines 48-63: the signal processor 42 determines the color (“component”) characteristics for certain (i.e. all) pixels by classifying the pixels (“components”) according to color);

an image characterizer communicatively coupled to the component characterizer for determining at least one image characteristic from the at least one component characteristic

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(column 4, lines 64-68: the signal processor 42 uses the classification of the pixels to determine the dominant color (“image characteristic”)); and

an image categorizer communicatively coupled to the image characterizer for automatically defining the at least one frame attribute from the at least one image characteristic (column 5, lines 10-13: the logic/control unit 30 defines the frame attribute (i.e. the frame color) from the image characteristic (i.e. the dominant color)).

Regarding claim 20, Jamzadeh discloses

a memory accessible by the image categorizer, the image categorizer automatically defining the at least one frame attribute in accordance with at least one framing scheme parameter stored in the memory (column 5, lines 10-13: the logic/control unit 30 is programmed to automatically define the frame attribute from a framing scheme parameter, which is simply a designation of one of the dominant colors; since the logic/control unit is programmed, it inherently comprises memory to store program instructions).

Regarding claim 22, Jamzadeh discloses a program storage medium readable by a computing apparatus (figure 1), having instructions for automatically generating a visibly pleasing framed image, comprising:

first logical segment to analyze a portion of a first data set representing rows and columns of pixels of an unframed digital image so as to identify at least one image characteristic for the digital image (column 4, lines 64-68: image is analyzed for color frequency);

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second logical segment to determine at least one frame attribute based on the at least one image characteristic (column 5, lines 10-13: high frequency colors are selected for inclusion in the frame); and

third logical segment to generate a second data set representing rows and columns of pixels of the framed digital image, the pixels defining a representation of the unframed digital image surrounded by a frame having the at least one frame attribute (column 4, lines 28-41: framed image is generated, wherein the framed portions include at least one of the dominant colors (i.e. attributes)).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jamzadeh in view of U.S. Patent 5,600,412 by Connors.

Regarding claim 21, Jamzadeh discloses the memory is writeable (i.e. a program is written to it), further comprising:

a user interface (45, figure 1) communicatively coupled to the memory for modifying the image size.

Jamzadeh does not disclose the user interface is for modifying the framing scheme parameter (i.e. the choice of frame color).

Connors discloses a similar frame generation system (figure 2). In particular, Connors discloses that a user inputs data on both the size and color preferences (column 6, lines 13-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jamzadeh by Connors to achieve the claimed invention by allowing the user to select the at least one framing scheme parameter (i.e. frame color selection) via a user interface since Connors shows that such a feature provides the user with direct control over the frame color.

8. Claims 1, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,421,062 by Higashio in view of U.S. Patent Application Publication 2001/0012062 by Anderson.

Regarding claim 1, Higashio discloses a method (figures 7 and 11) for automatically generating a framed digital image, comprising:

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identifying at least one image characteristic for the digital image (S306, figure 7: the “event” of the image is identified);

determining at least one frame attribute based on the at least one image characteristic (figure 11: the type of frame is determined at S424, S425, and S426 based on the event information); and

generating a second data set representing rows and columns of pixels of the framed digital image, the pixels defining a representation of the unframed digital image surrounded by a frame having the at least one frame attribute (column 7, lines 32-42: the digital image is displayed with its corresponding ornamental frame).

Higashio does not disclose “analyzing a portion of a first data set representing rows and columns of pixels of an unframed digital image” so as to identify the image characteristic. Column 6, lines 17-22: if there is no predetermined event information, then the user assigns an event to the image.

Anderson discloses a method for automatically categorizing an image. In particular, Anderson discloses analyzing an image to obtain image characteristics, which determine the category of image. Paragraph 49.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Higashio by Anderson to analyze at least a portion of the image to identify the image characteristic(s), as claimed, since Anderson teaches that computer analysis of an image for the purposes of categorizing the image eliminates the need for a user to manually designate the image categories (see paragraph 6).

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Regarding claim 10, Higashio discloses assigning the unframed image to an image category based on the image characteristic (figure 7: the unframed image is given a category at S308, S309, and S310 based on the event information); and

choosing the at least one frame attribute based on the image category (figure 11: S424, S425, and S426).

Regarding claim 12, Higashio and Anderson disclose the category pertains to an event or a scene such as people (portrait), nature scenes (landscape), and cityscapes. Anderson, paragraph 49.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,587,596 by Haeberli (figure 5 and column 11, lines 3-30)

U.S. Patent 5,815,645 by Fredlund

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (703) 306-3489. The examiner can normally be reached Monday through Thursday from 8:00 to 5:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

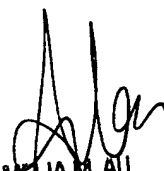
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (703) 306-0377.

CML

Group Art Unit 2623

12 April 2004


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600